



# Efficiency Maine Trust Programs and Incentives for Communities

Incentives, Resources, and Example Projects from Efficiency Maine

June 17, 2022



# Agenda

- **Introduction**

Michael Stoddard

Executive Director at Efficiency Maine

- **Municipal Energy Efficiency Opportunities for Buildings**

Rick Meinking

Senior Program Manager for Commercial Initiatives at Efficiency Maine

- **Community Opportunities for Electric Vehicles (EVs) and EV Charging**

Molly Siegel

Program Manager for Electric Vehicle Initiatives at Efficiency Maine

- **Q&A**

# Efficiency Maine Introduction

- Independent, quasi-state agency
- Runs programs to promote energy conservation for all customer groups, all energy types, in all areas of Maine
- Provides rebates, financing, technical information and registry of vendors
- Funded by electric and natural gas ratepayers, Regional Greenhouse Gas Initiative, ISO New England Grid, grants, and other sources
- Board appointed by the governor and confirmed by the legislature

# Using New Funding Sources for Energy Efficiency

How can towns and counties deploy available financial resources in a way that will:

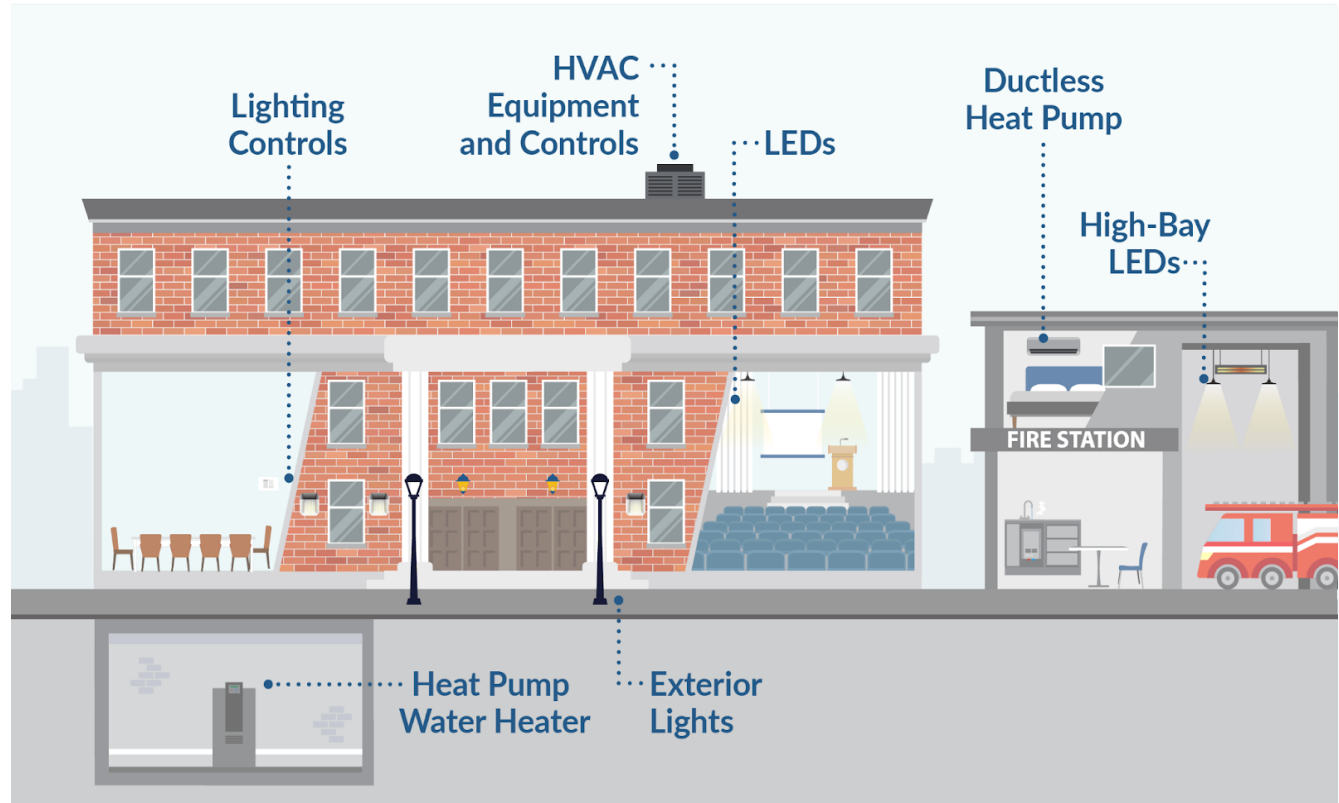
- lower the local tax burden
- cut carbon pollution
- make public buildings more comfortable, productive and resilient?



The answer is easy: **Invest in energy efficiency.**

# Efficiency Maine Incentives Available

- Variable refrigerant flow systems (VRFs)
- High-performance heat pumps
- Lighting
- Wastewater treatment
- Electric vehicles (EVs) and chargers
- Refrigeration





# Variable Refrigerant Flow System



Variable refrigerant flow (VRF) systems are HVAC systems that use heat pump technology to efficiently heat and cool building spaces, and can simultaneously send heat and air conditioning to different rooms in the same building.

Ideal solution for:

- offices
- hospitals
- schools
- long-term care facilities
- hospitality venues, or
- other large spaces with many rooms.

VRF systems can be installed in new construction or retrofitted as part of a heating/cooling upgrade project.

# Example Municipal Projects: Variable Refrigerant Flow Systems

Municipality	Location	Efficiency Maine Incentive*	Project Cost	Square Feet Served	Cost per Square Foot	Cooling Capacity	Previous Heating Fuel
Bangor	Bangor School Department	\$44,370	\$98,575	7,395 ft <sup>2</sup>	\$13.33	153,300 Btu/hour	Oil
Fryeburg	Fryeburg Academy Student Union	\$37,960	\$93,391	11,680 ft <sup>2</sup>	\$8.10	138,000 Btu/hour	New Construction
Poland	Regional School Unit (RSU) 16	\$8,700	\$19,328	1,450 ft <sup>2</sup>	\$12.33	69,000 Btu/hour	Oil
Southwest Harbor	Public Library	\$22,516	\$65,127	5,629 ft <sup>2</sup>	\$11.57	138,000 Btu/hour	Oil
Brunswick	Brunswick School Department	\$217,860	\$347,950	67,033 ft <sup>2</sup>	\$5.19	120,000 Btu/hour	New Construction

*\*Not representative of current program incentives.*

# Example Municipal Projects: Heat Pump Systems

Municipality	Location	Equipment	# of Units	Material Cost	Total Cost	Efficiency Maine Incentive*
<a href="#">Alfred</a>	Town Hall	Single Zone Heat Pump – 9,000 Btu/hr	2	\$4,905.42	\$9,225.42	\$3,200
Belmont	Fire House	Single Zone Heat Pump – 15,000 Btu/hr	1	\$4,075.46	\$5,115.46	\$1,600
Belmont	Town Office	Single Zone Heat Pump – 15,000 Btu/hr	3	\$11,903.72	\$14,243.72	\$4,800
Medway	Fire Department	Single Zone Heat Pump – 15,000 Btu/hr	2	\$5,400	\$7,600.00	\$3,200
Norridgewock	Town Office	Single Zone Heat Pump – 15,000 Btu/hr and 9,000 Btu/hr	3	\$8,875.00	\$11,750.00	\$4,800
Richmond	Public Works	Single Zone Heat Pump – 9,000 Btu/hr	2	\$5,341.00	\$6,541.00	\$3,200

\*Not representative of current program incentives.





# Example School Lighting Project: Millinocket

## Millinocket School Department

- improved lighting in the gymnasiums and corridors at junior-senior high school
- upgraded lighting in elementary school classrooms, hallways, cafeteria, and lobby

## Savings:

- High school = \$6000 / year
- Elementary school = \$7000 / year
  - Energy load dropped from 1100 watts per elementary school classroom to 400 watts
- Savings from both projects = 87,000 kWh / year



*“This was a relatively easy process that translated into real up-front and long-range dollar savings. Without Efficiency Maine’s incentives, I would not have been able to complete these projects.”*

*Louis DiFrederico,  
Facilities Manager for the Millinocket School Department*

# Examples of School Projects: Lighting

School Name	District	Annual kWh Savings	Annual Energy Cost Savings	Total Cost	Efficiency Maine Incentive*
Brewer High School	Brewer	21,699 kWh	\$3,254.92	\$13,077.00	\$6,509.84
Lake Region Vocational Center	Lake Region	32,359 kWh	\$4,853.90	\$9,070.00	\$7,256.00
<a href="#">Limestone</a>	Limestone	129,975 kWh	\$19,496.30	\$84,618.75	\$38,957.02
<a href="#">Millinocket - Granite Street School</a>	Millinocket	47,668 kWh	\$7,150.14	\$29,526.12	\$14,300.28
Songo Locks Elementary School	Lake Region	7,122 kWh	\$1,068.28	\$2,917.00	\$2,136.56
<a href="#">St. John Valley Technology Center</a>	MSAD 33	46,163 kWh	\$6,924.40	\$32,975.00	\$13,041.45
Washburn High School	MSAD 45	67,184 kWh	\$10,077.55	\$41,277.50	\$19,976.22

*\*Not representative of current program incentives.*

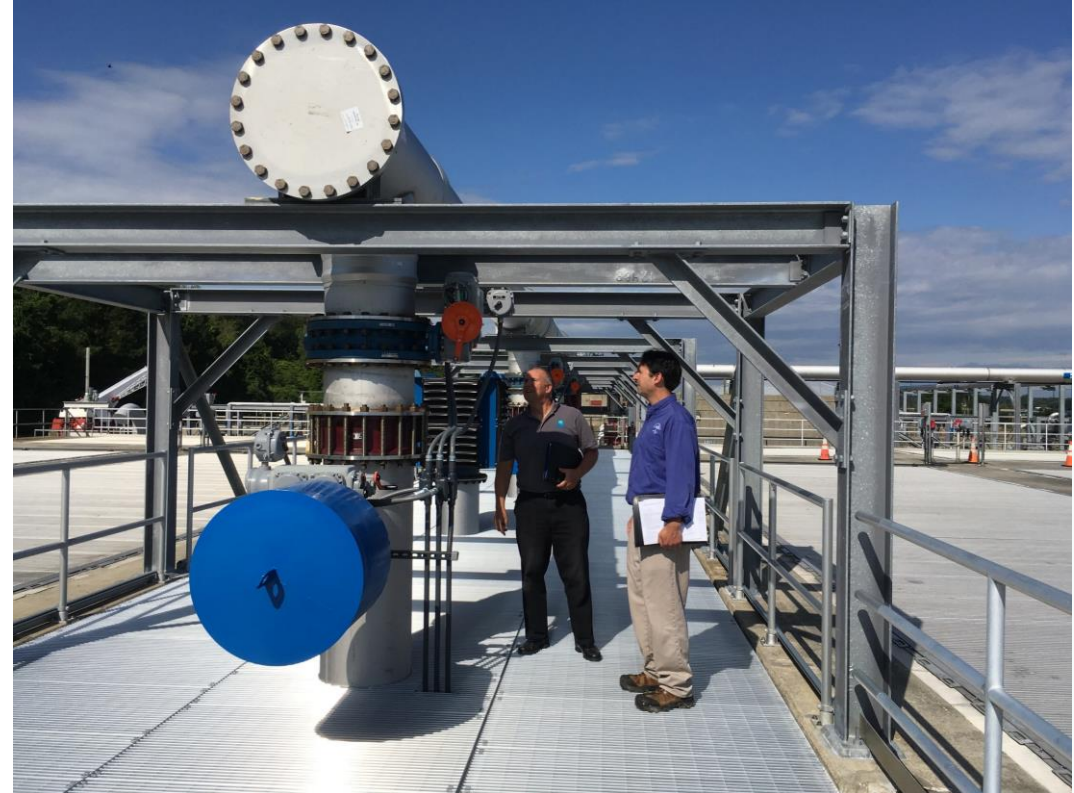
# Example Municipal Project: Wastewater Treatment

**Portland Water District (PWD):** East End Wastewater Treatment Facility aeration retrofit

- Fine-bubble aeration
- High efficiency blowers
- Controls

## Project Economics:

- Project Cost: \$415,880 (incremental cost of more efficient blowers)
- Efficiency Maine Incentive: \$203,337
- Annual Energy Savings: 726,204 kWh, 158 kW (summer demand)
- Return on Investment: 2.9 years with incentive, 5.7 years without incentive



# Examples of Custom Wastewater Treatment Projects

Municipality	Facility	Equipment Installed	Total Cost	Efficiency Maine Incentive	Energy Savings
<b>Augusta</b>	Augusta Wastewater Treatment Plant	High-efficiency blowers and pumps	\$121K	\$60K	244,242 kWh/year
<b>Bangor</b>	Bangor Water District	Passive water mixing system	\$140K	\$50K	49,000 kWh/year
<b>Lewiston/Auburn</b>	Water Pollution Control Authority	Two 230 kW Liebherr co-generation engines	\$817K	\$330K	2.9 million kWh/year
<b>Portland</b>	Sebago Lake Water Treatment Facility	UV disinfection system, ozone generation system, HVAC upgrades, high-efficiency lighting	\$1.9M	\$300K	2.4 million kWh/year
<b>Portland</b>	East End Wastewater Treatment Facility	High-efficiency blowers	\$416K	\$203K	726,000 kWh/year

# Federal MJRP Initiatives at Efficiency Maine

	Initiative	Budget	Priority Uses
1	Efficiency in Hospitality	\$4M	Heat pump HVAC
2	Efficiency in Local Government, Schools & Congregate Housing	\$15M	Heat pump HVAC
3	Low- and Moderate-Income (LMI) Weatherization	\$25M	Insulation
4	Efficiency in Manufacturing	\$6M	Custom
5	EV Charging Stations	~\$8M*	EV Chargers

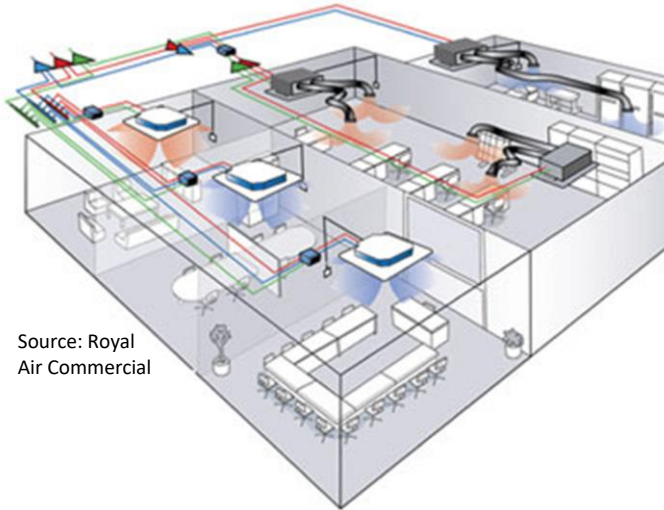
\* Received by MaineDOT; Administered by Efficiency Maine.



# Efficiency in Local Government, Schools & Congregate Housing



**VRF**  
Heat Pump System



Source: Royal Air Commercial



Source: Mitsubishi Electric

**Mini-split**  
Heat Pumps



**Vertical Terminal**  
Heat Pump System



Source: <http://www.perryairemechanical.com/>

# Efficiency in Local Government, Schools & Congregate Housing

**Description:** Financial incentives energy efficient equipment upgrades to reduce energy costs + technical support to develop projects

**Relevant EMT Programs:** C&I Prescriptive Initiatives, C&I Custom Program

**Eligibility:**

- Local governments (municipal, county, and tribal)
- Public schools
- Congregate housing (e.g., long-term care, group home, supportive housing)

**Priority/Focus Areas:**

- Entities a) serving small population sizes, b) located in rural areas, c) serving economically disadvantaged communities
- HVAC beneficial electrification (e.g., heat pumps for space and water heating, ERV systems); focus on retrofits where entities are currently using unregulated fuels)

**Budget:** \$15 million



# Efficiency in Local Government, Schools & Congregate Housing

## Year 1 activities:

- Launch funding opportunity for schools in MSADs, RSUs, AOS, tribal districts with focus toward electrification of HVAC [**June 2022**]
- Outreach to school boards, superintendents, MSMA, EPMA, MASBO

## Year 2 activities:

- Launch funding opportunity for municipalities (rural Maine towns and tribal) [**August 2022**]
- Launch funding opportunity for long-term care facilities (assisted living, nursing homes) [**October 2022**]



Local Governments/Schools: <https://www.energymaine.com/at-work/public-sector/>

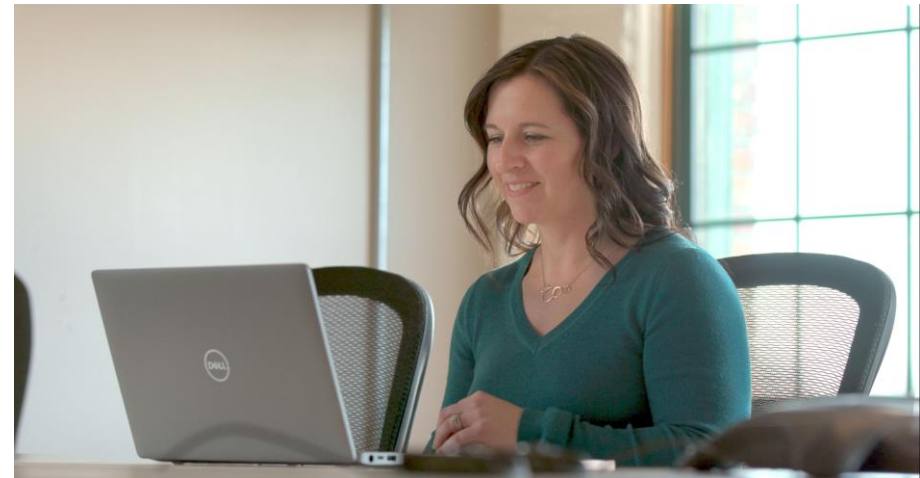
Long-term Care: <https://www.energymaine.com/at-work/long-term-care/>





**GET EFFICIENCY MAINE INVOLVED EARLY IN  
YOUR DECISION-MAKING PROCESS**

**CONTACT US FOR A CONSULTATION**



**866-376-2463**

**[CIP@efficiencymaine.com](mailto:CIP@efficiencymaine.com)**

***Efficiency Maine offers no cost, no obligation virtual consultations.***

# Suggested RFP Language

Language to consider when a municipality is seeking contractors:

"When submitting your bid in response to RFP # \_\_\_\_\_ bidder must provide estimated financial incentive(s) that are available through Efficiency Maine. Also provide the manufacturer's equipment specifications (cut-sheets) that are eligible for these estimated incentive(s)."



# Electric Vehicles (EVs) and Charging Solutions



**PUBLIC  
CHARGING**

**WHAT MAKES A GOOD  
EV CHARGING SITE?**



# EV Charging Stations

**Description:** Support the continued expansion of EV charging at public locations, workplaces, and multi-unit dwellings

**Relevant EMT Program:** EV Initiatives

**Eligibility:** Property owners and operators of EV charging stations

**Priority/Focus Areas:**

- Interstate and other major travel corridors
- Less populous, more remote routes, towns, and destinations
- Charging opportunities for apartment dwellers who cannot install a charger at home
- Economically disadvantaged communities

**Funding Sources:** Maine Jobs & Recovery Plan (MJRP), Infrastructure Investment and Jobs Act (IIJA), NECEC Settlement

**Budget:** \$28 million - \$37 million (depending on successful federal grant request)

# Maine Plan for EV Infrastructure Deployment (PEVID)

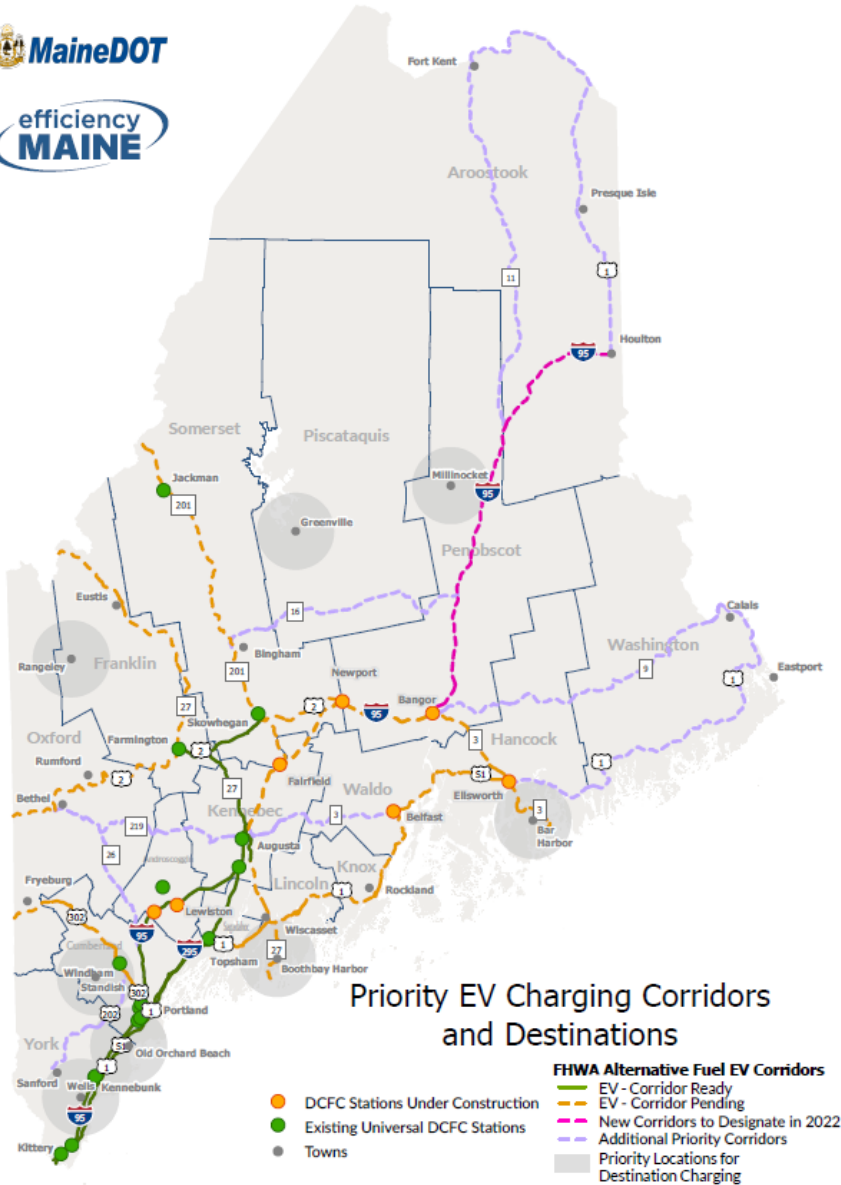
## Background

- Developed by EMT, MDOT, GOPIF, GEO
- Identifies goals, priorities and strategies for EV infrastructure in Maine
- Outlines plan for use of:
  - Maine Jobs and Recovery Plan (using federal ARPA funds),
  - Infrastructure Investment and Jobs Act (IIJA) formula funds,
  - IIJA discretionary grants, and
  - Other funding sources
- Updated each year

## Timeline (Tentative, subject to change)

- July 1: Maine Plan for EV Infrastructure Deployment (PEVID) submitted to US DOT/DOE
- September 2022: Maine PEVID approved by FHWA
- Fall 2022 onward: Funds available for public charging in Maine

# Priority Categories for EV Charging



## I. Extending Lines and Filling Gaps w/High-Speed Charging (DCFC)

*Serving drivers needing expedited charging while away from their home or place of business, providing full coverage across the state*

- a. Alternative Fuel Corridors
- b. Other priority corridors
- c. Adding capacity in high-traffic areas

## II. On-Street/Lot Parking

*Serving tenants, condos, & others lacking off-street parking*

- a. DCFC – where overnight charging is not practical, esp. LMI residents
- b. L2 - for overnight charging, esp. LMI residents
- c. L2 - for workplace charging

## III. Destination Charging

*Serving day-trippers, overnight visitors, tourists either off the main roads or where extra capacity is needed.*

- a. DCFC - very highly trafficked, short stay, or day-trippers
- b. L2 - longer stay or overnight

# Investment in Disadvantaged Communities (DAC)

Fig. 1 Density of affordable housing developments and disadvantaged communities (DACs) shaded in gray.

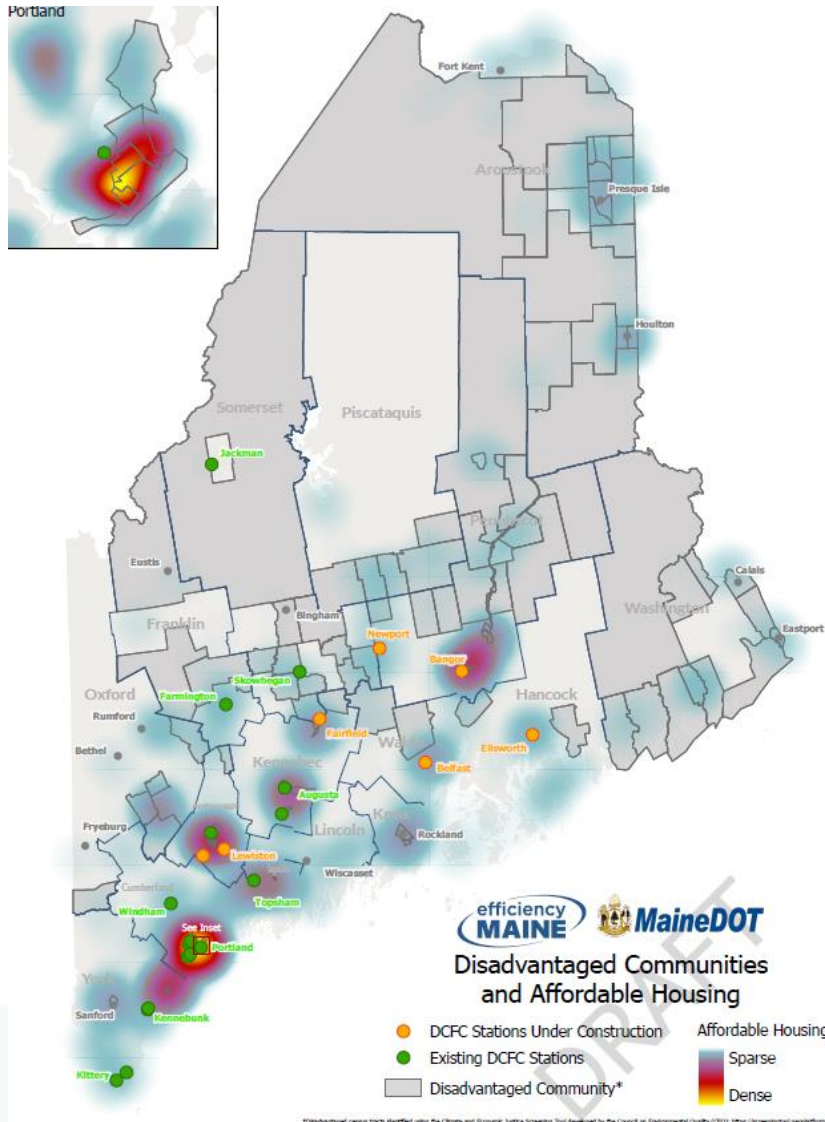
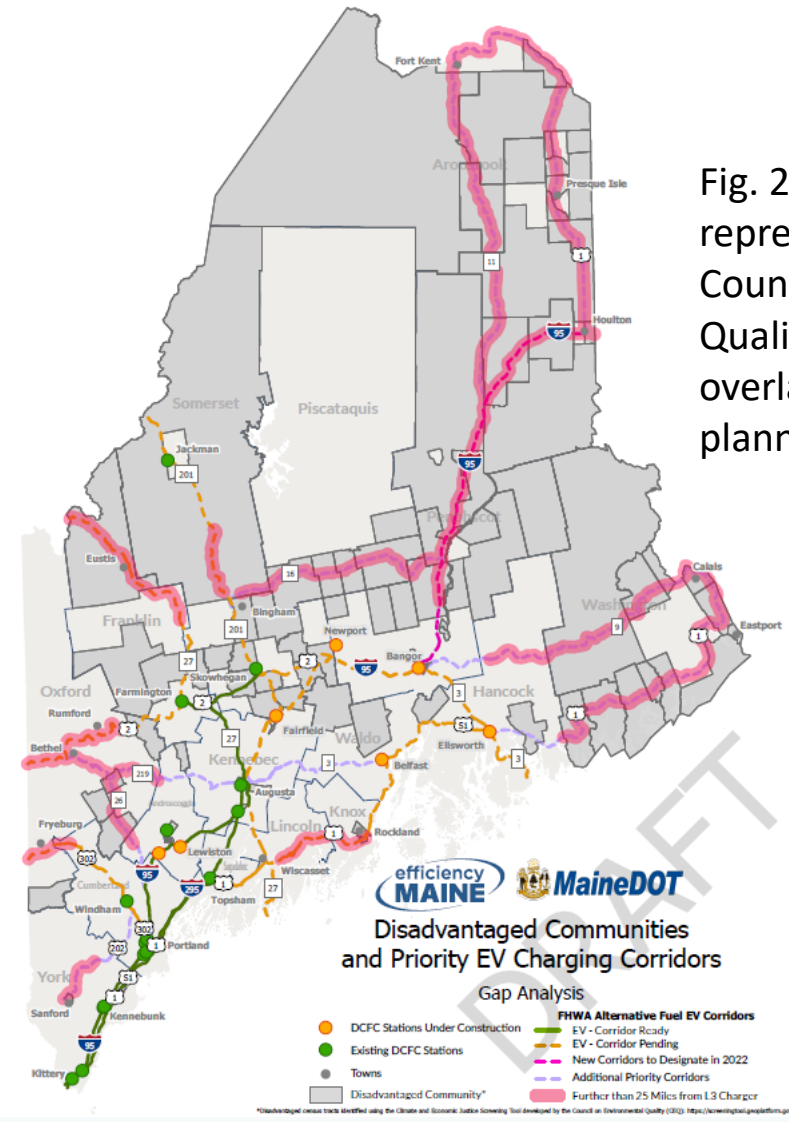


Fig. 2 Dark gray areas represent DACs, per Council on Environmental Quality (CEQ), illustrating overlap with Maine's planned DCFC network





# Summary Budget Allocations and Plug Counts

Category	L2 Plugs	DCFC Plugs	Total Incentive Cost
I. Extending Lines & Filling Gaps With DCFC	0	114	\$ 22,300,000
II. On-Street/Lot Parking	600	30	\$ 7,500,000
III. Destination Charging	500	18	\$ 5,600,000
IV. Public Truck Stops/Depot Fast Charging	0	10	\$ 1,100,000
<b>TOTAL</b>	<b>1,100</b>	<b>180</b>	<b>\$ 36,500,000</b>

# Examples of Public Charging Installations



*Hannaford Supermarket,  
North Windham (DCFC)*



*Rockland (Level 2)*



*Portland Jetport (Level 2)*



*Calzolaio Pasta, Wilton (Level 2)*



# Example of Municipal Electric Vehicle Project: Auburn

## Nissan LEAF

Efficiency Maine  
incentive: \$7,500\*

Two single port, non-  
networked, wall-  
mounted Level 2  
chargers

Efficiency Maine  
incentive:  
\$4,200\*



*\*May not be representative of current program incentives.*

# EV Rebates for Governmental Entities

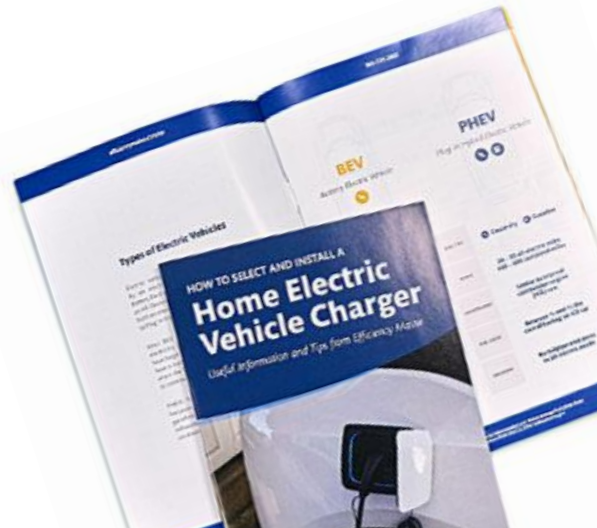
Type of Vehicle	Rebate
Battery Electric Vehicle (BEV)	\$7,500
Plug-in Hybrid Electric Vehicle (PHEV)	\$2,000
Level 2 Charger	\$350 per plug

- Instant rebates at Maine participating dealerships
- Must request pre-approval through Efficiency Maine website before purchase
- Maximum of 5 EV rebates per entity per 12-month period, of which not more than 2 may be for *leased* EVs

# Web Resources

- EV video series
- Vehicle cost calculator
- Charging station locator
- Home charging guide
- Background on EV initiatives
- FAQs

[efficiencymaine.com/ev](http://efficiencymaine.com/ev)



### Go the Distance in an EV

Legendary Maine humorist, Tim Sample, helps Maine drivers understand how EVs work.

▶ Watch Now

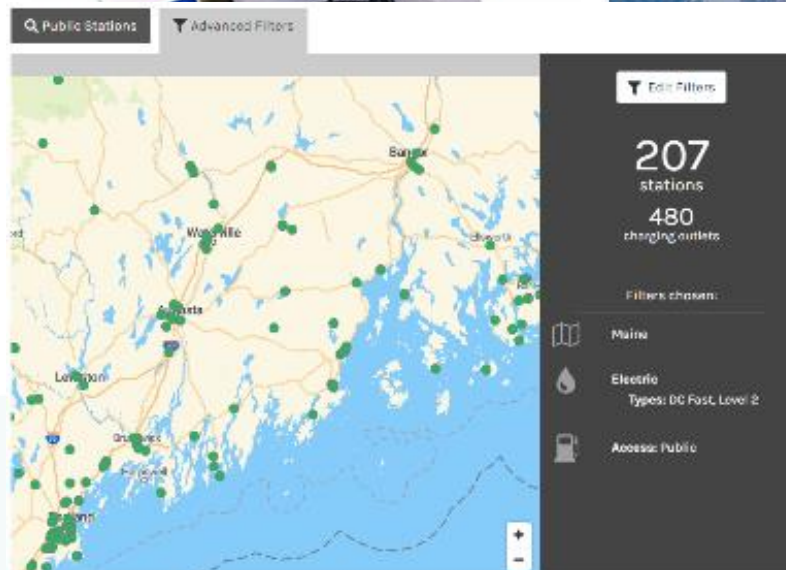


### HOW TO FIND EV CHARGERS

#### How to Find EV Chargers

There are more than 500 public charging plugs in Maine. Learn how to find them with the help of an app.

▶ Watch Now



### How to Use EV Chargers

Public EV charger

▶ Watch Now



### HOME CHARGING: INSTALLATION TIPS

#### Home Charging

This video will show you some handy tips for installing your own home EV charger.

▶ Watch Now





## STRETCH YOUR FUNDING FURTHER.

- Be the first to hear about funding opportunities: [www.energymaine.com/about/newsletter-signup/](http://www.energymaine.com/about/newsletter-signup/)
- See funding opportunities when they are posted: [www.energymaine.com/opportunities/](http://www.energymaine.com/opportunities/)
- Prepare your community for EV charging: <https://www.energymaine.com/at-work-electric-vehicles-and-charging-solutions/>

**866-376-2463**

[info@energymaine.com](mailto:info@energymaine.com)

[energymaine.com/at-work/public-sector/](http://energymaine.com/at-work/public-sector/)

# Thank You!

*Efficiency Maine incentive amounts are subject to change without notice.*

# Links to Helpful Resources

[Maine Municipal Association American Rescue Plan Updates](#)

[Efficiency Maine Commercial and Industrial \(C&I\) Prescriptive Incentive Program](#)

[Efficiency Maine Electric Vehicle Rebate Program](#)

[Electric Vehicle Resources for Fleets and Installation of Charging Infrastructure](#)

[Efficiency Maine Qualified Partner Locator](#)

[National Renewable Energy Laboratory - Data and Tools](#)

- [Buildings](#)
- [Energy Analysis](#)
- [Water](#)

[A Guide to Zero Energy and Zero Energy Ready K-12 Schools](#)

[Efficiency Maine Custom Program](#)

**Any Questions?**